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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/722,889	11/27/2000	Henry F. Lada	COMP:0129 (P00-3124)	6088

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EXAMINER

YANCHUS III, PAUL B

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/722,889

Applicant(s)

LADA ET AL.

Examiner

Paul B Yanchus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This non-final office action is in response to communications filed on 1/9/04.

The rejections to claims 1-10 and 12-26 are respectfully maintained and reproduced infra for applicant's convenience.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 7-10, 13 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishikawa et al., US Patent no. 6,266,711.

Regarding claims 1 and 3, Ishikawa et al. teaches a method comprising:

coupling an option pack to a main unit [Figure 2 and column 4, lines 5-10],

the option pack comprising a first memory device [element 31 in Figure 2] configured to store one or more applications and drivers associated with the one or more applications [column 4, line 66 – column 5, line 25 and column 10, lines 19-30], and a second memory device [element 31 in Figure 2] configured to store identification data [column 6, lines 1-24],

the main unit comprising a device manager [control unit] configured to receive the identification data [communication service ID] from the second memory device [column 6, lines 1-24], a power supply [column 5, line 35], and a third memory [element 25 in Figure 2];

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transmitting the identification data from the second memory device to the device manager [column 6, lines 1-24]; and

downloading the one or more applications and associated drivers from the first memory device to the third memory device [column 8, lines 21-45].

Ishikawa et al. does not explicitly teach storing the identification data in a second memory device. However, it is inherent in the teachings of Ishikawa et al. that the identification data would have to be stored in a memory device located on the option pack, such as element 31 in Figure 2.

Regarding claim 4, Ishikawa et al. teaches that the main unit is able to communicate with the option pack when the option pack is first connected [column 6, lines 1-24]. Therefore, it is inherent in the teachings of Ishikawa et al. that some driver has to be installed in the main unit for initial communication with the option pack.

Regarding claim 7, Ishikawa et al. teaches, in one embodiment, that both drivers and application data are downloaded to the main unit from the option pack [column 8, lines 21-44]. Therefore, no associated drivers or applications would have been stored on the third memory device located in the main unit.

Regarding claim 8, Ishikawa et al. teaches that the third memory device is a RAM [element 25 in Figure 2]. Since Ishikawa et al. teaches using RAM (which is a volatile memory), it is inherent that the applications and drivers are only meant to be stored temporarily.

Regarding claim 9, Ishikawa et al. teaches downloading the one or more applications and associated drivers from the first memory device to the third memory device [column 8, lines 21-45].

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Regarding claim 10, Ishikawa et al. teaches a connection detection unit which determines if an option pack is connected or disconnected from the main unit. Therefore, it is inherent in the teachings of Ishikawa et al. that the option pack can be joined with or separated from the main unit.

Regarding claim 13, Ishikawa et al. teaches identification data, which identifies the option pack and indicates sort of program stored on the option pack [column 6, lines 1-24].

Regarding claim 20, Ishikawa et al. teaches method of connecting an option pack to a main unit comprising:

powering on the main unit [column 5, lines 35-37];

determining if there is an option pack coupled to the main unit [column 4, lines 5-10 and column 5, lines 63-67];

notifying the main unit that the option pack is present [column 4, lines 5-10 and column 5, lines 63-67];

transmitting identification information from the option pack to the main unit [column 6, lines 1-24]; and

downloading one or more software applications and associated drivers from the option pack to the main unit [column 8, lines 21-45].

Ishikawa et al. teaches sending a notification signal from a connector connection detecting unit when the option pack is connected to the main unit [column 5, lines 64-67], but does not specifically teach sending an interrupt signal to the control unit of the main unit.

However it is inherent in the teachings of Ishikawa et al. that the notification signal is an interrupt type signal. The purpose of an interrupt signal is to command the control unit to stop

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its current task and service the source of the interrupt signal. In this case, the control unit is to immediately service the option pack once the option pack is connected to the main unit.

Ishikawa et al. teaches that the control unit detects identification information immediately after it receives the notification signal [column 6, lines 1-24].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 6, 14-19 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al., US Patent no. 6,266,711.

Regarding claim 2, Ishikawa et al. teaches employing connector to connect the main unit and option pack. Ishikawa et al. does not specifically teach employing a 100-pin connector to connect the main unit and option pack. However, it would have been obvious to one of ordinary skill in the art to use a connector with a sufficient amount of pins for communication between the main unit and the option pack. Choosing to use a 100-pin connector is simply a matter of design choice.

Regarding claims 5 and 6, it is inherent in the teachings of Ishikawa et al. that the first and second memory devices are non-volatile, since the identification data and program data would not be erased when power is not supplied to the option pack. Ishikawa et al. does not

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explicitly teach that the first memory device is a ROM and the second memory device is an EEPROM. However, choosing to use a ROM or EEPROM is simply a matter of design choice.

Regarding claim 14, Ishikawa et al. teaches transmitting identification data from the option pack to the main unit [column 6, lines 1-24]. Ishikawa et al. does not explicitly teach using a serial interface to transfer the identification data. However serial interfaces a well known in the art and it would have been obvious to one of ordinary skill in the art to use a serial interface to transfer the identification data.

Regarding claim 15, it would have been obvious to one of ordinary skill in the art that transmitting the identification data would take less power than transmitting application and driver data, since the size of the identification data would be less than the size of the drivers and applications. It is well known in the art that transmitting less data requires less power.

Regarding claims 16, 18, 22 and 23, it is well known in the art to determine if a power supply can provide enough power to perform a function before attempting to perform that function and notifying a user accordingly.

Regarding claims 17, 19, 24 and 25, it is well known in the art to determine if a memory has enough capacity to store a collection of data before attempting to write the collection of data to the memory.

Regarding claim 21, hot-plugging devices are well known in the art.

Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al., US Patent no. 6,266,711 in view of Maeda, US Patent no. 6,557,033.

Regarding claim 12, Ishikawa et al. teaches a method of connecting an option pack to a main unit, downloading drivers and applications from the option pack to the main unit and separating the option pack from the main unit, as described above. Ishikawa et al. does not teach deleting the drivers and applications from the main unit's memory when the option pack is separated from the main unit.

Maeda teaches a method of sending a disconnection signal to a main unit when a peripheral device changes its operation from a first function to a second function. In response to the disconnection signal, the main unit deletes, from memory, the device drivers associated with the first function [column 12, lines 20-53 and column 13, line 62 – column 14, line 15]. Therefore, Maeda teaches a main unit which deletes device drivers associated with a peripheral device when that peripheral device is disconnected.

It would have been obvious to one of ordinary skill in the art to combine the teachings of Ishikawa et al. and Maeda. Deleting option pack device drivers from main unit memory when the option pack is disconnected prevents any potential conflicts when connecting different option packs that perform different functions and require different device drivers.

Regarding claim 26, Ishikawa et al. and Maeda teach a method of connecting an option pack to a main unit, downloading drivers and applications from the option pack to the main unit, separating the option pack from the main unit and deleting the drivers and applications from the main unit's memory, as described above. Furthermore, it is inherent in the teachings of Ishikawa et al. and Maeda that a connection presence notification signal would be de-activated when the option pack is no longer connected to the main unit, since the notification signal reflects the presence of a connection between the main unit and the option pack. Disabling control buffers

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and terminating the functionality of the downloaded applications is also inherent in the teachings of Ishikawa et al. and Maeda. Any kind of control buffer or application used in the interactions between the main unit and the option pack is no longer needed if the option pack is no longer interacting with the main unit.

Response to Arguments

Applicant's arguments filed on 1/9/04, regarding claims 1-10 and 12-26 have been fully considered but they are not persuasive.

Regarding claims 1-10, 13-15 and 20-21, Applicant argues that the examiner fails to appreciate the advantages that may be realized by using independent memory devices for the applications/drivers and identification information. Although there may be advantages to using two independent memory devices, the examiner interprets the first and second memory devices of the applicant's invention to comprise a single memory device. Support for the interpretation can be found in claim 3. Claim 3 further defines the applicant's invention by specifying, "the first memory device and the second memory device comprise the same memory device." Therefore, the rejections to claims 1-10, 13-15 and 20-21 are respectfully maintained.

Regarding claims 16, 18, 22 and 23, Applicant challenges the examiner's assertion that "determining if a power supply can provide enough power to perform a function before attempting to perform that function" is well known in the art. The examiner submits Jimbo et al., US Patent no. 6,173,408, as evidence that "determining if a power supply can provide enough power to perform a function before attempting to perform that function" is, in fact, well known in the art. Specifically, Jimbo et al. teaches checking to make sure there is enough available

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power to execute an instruction before executing the instruction [column 10, lines 1-50].

Therefore the rejection to claims 16, 18, 22 and 23 is maintained.

Regarding claims 17, 19, 24 and 25, Applicant challenges the examiner's assertion that "determining if a memory has enough capacity to store a collection of data before attempting to write the collection of data to the memory" is well known in the art. The examiner submits Otsuka et al., US Patent no. 6,201,771, as evidence that "determining if a memory has enough capacity to store a collection of data before attempting to write the collection of data to the memory" is, in fact, well known in the art. Specifically, Otsuka et al. teaches checking an available capacity of a disk before downloading data to the disk [column 22, lines 22-47]. Therefore the rejection to claims 17, 19, 24 and 25 is maintained.

Regarding claims 12 and 26, Applicant argues that the examiner does not indicate where Maeda teaches, "removing the one or more applications and associated drivers from the main unit." However, in the previous office action [paper no. 3] the examiner clearly indicates that the limitation of "removing the one or more applications and associated drivers from the main unit" can be found in "column 12, lines 20-53 and column 13, line 62 – column 14, line 15" of the Maeda reference. Therefore the rejection to claims 17, 19, 24 and 25 is maintained.

Applicant's arguments with respect to claims 11 and 27 have been considered but are moot in view of the new ground(s) of rejections included below.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al., US Patent no. 6,266,711, in view of Sugimura, US Patent no. 6,582,311.

Ishikawa et al. does not explicitly teach uploading applications and device drivers from the main unit to the option pack when disconnecting the option pack. Sugimura teaches transferring an application program from a main unit to a removable memory device [column 10, lines 10-49].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Ishikawa et al. and Sugimura. Adding the ability to upload applications and drivers from a main unit to an option pack allows a user of the main unit to create a backup copy of applications and drivers and also enables the user to customize which applications and drivers are stored on the option pack.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al., US Patent no. 6,266,711 and Maeda, US Patent no. 6,557,033, in view of Sugimura, US Patent no. 6,582,311.

Ishikawa et al. and Maeda do not explicitly teach uploading applications and device drivers from the main unit to the option pack when disconnecting the option pack. Sugimura teaches transferring an application program from a main unit to a removable memory device [column 10, lines 10-49].

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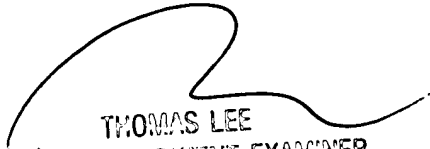
It would have been obvious to one of ordinary skill in the art to combine the teachings of Ishikawa et al. and Maeda with the teachings of Sugimura. Adding the ability to upload applications and drivers from a main unit to an option pack allows a user of the main unit to create a backup copy of applications and drivers and also enables the user to customize which applications and drivers are stored on the option pack.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul B Yanchus whose telephone number is (703) 305-8022. The examiner can normally be reached on Mon-Thurs 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on (703) 305-9717. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paul Yanchus
April 5, 2004


THOMAS LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100